

84-038830/07 SOC FRANC HOECHST 06.07.82-FR-011817 (13.01.84) C08f-02/32 C08f-04/40 C08f-20/56 Lipo-soluble, redox couple for inverse emulsion polymerisation - comprises organic pref. cumene hydroperoxide and thionyl chloride	A60 E14 (E36) FARH 06.07.82 *FR 2529-895-A	A(2-A), 2-A3, 4-D4, 10-B3) E(10-A4, 31-F5)	211
C84-016246 A liposoluble, redox couple for initiating in- verse, o/w emulsion polymer, of water soluble vinyl mono- mers reactive at 0° C, comprises an organic hydroperox- ide and thionyl chloride. Water-soluble homo- or copolymers obtd, using the couple are also claimed. <u>ADVANTAGES</u> Use of the redox couple results in easy control of heat evolution. The polymers obtd. are of consistent quality, have high mol. wts. and are free from microgels. The couple is entirely soluble in the continuous oil phase and sparingly soluble in water. <u>PREFERRED COUPLE</u> The hydroperoxide is cumene hydro-peroxide. Molar ratio of hydroperoxide to thionyl chloride is 0.1-1.:		<u>COPOLYMERS</u> The couple is pref. used for the prepn. of salified or quaternised acrylamide/dimethylaminoethyl acrylate or salified acrylamide/2-acrylamide 2-Me propanesulphonic acid. <u>EXAMPLE</u> 298.1 g acrylic acid in 260 g water and 197 g NH ₄ OH (34%) were mixed at below 25° C (pH 6). The obtd. soln. was then added with stirring to a soln. of 260 g 10-12 C n-alkanes of b.pt. 195-230° C and 29.6 g sorbitan isoste- arate. The emulsion was homogenised to a Brookfield viscos- ity of 400-800 mPa.s (20 rpm. at 20° C). The emulsion was flushed with N ₂ to remove O ₂ and then cooled to 5° C. A soln. of 0.08 g cumene hydroperoxide in 10 cc. of 10- 12 C n-alkanes (70-73%) was added to the emulsion follow- ed by dropwise addition of a soln. of 0.105 g SOCl ₂ in 30 cc. of the above alkanes. One minute after the start of the addition of SOCl ₂ , an exothermic reaction occurred and the temp. rose by 4-6° C per min. In 15 mins. the reaction medium was at 87° C. FR 2529895-A*	

The reaction mixt. was allowed to stand at that temp. for 1 hr. and then cooled to room temp.

An o/w dispersion of NH_4 polyacrylate was obtd. with a Brookfield viscosity of 100-150 mPas and a Brookfield viscosity of 1500-2000 mPas as a 5% soln. in water. Solids content was 34%. (10pp950WADwgNaO/O)



FR2529895-A

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